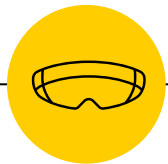# Intelligent Virtual Environments

Development Work: Assigments

Jose Barambones (j.barambones@upm.es)
D–5106, ETSI Informáticos, UPM

Assignment rules

Assignment 1 (Foundations)

- ◉ 20% of final grade

- ◉ **In pairs**

- ◉ Class-oriented, to complete and polish in study time.

- ◉ Goal: **Learn and apply the Unity3D basis for VE development**.
  - ○ Scene & Camera
  - ○ Assets and Game Objects
  - ○ Scripting and mechanics
  - ○ Basic interaction

Assignment 2 (VR/AR practice)

- ◉ 15% of the final grade

- ◉ **In pairs**

- ◉ Study time.

- ◉ Goal: **Learn and apply basic immersion techniques for VR or AR project:**
  - ○ Head movement
  - ○ Reticles
  - ○ Feedback

Assignment 1

Assignment rules

Assignment 1.1 (VR tutorial)

- 10% of final grade
- https://developers.google.com/cardboard/develop/unity/quickstart

Assignment 1.2 (AR tutorial)

- 10% of final grade
- https://learn.unity.com/tutorial/configure-your-ar-development-environment
- https://docs.unity3d.com/Packages/com.unity.template.ar-mobile@2.1/manual/index.html
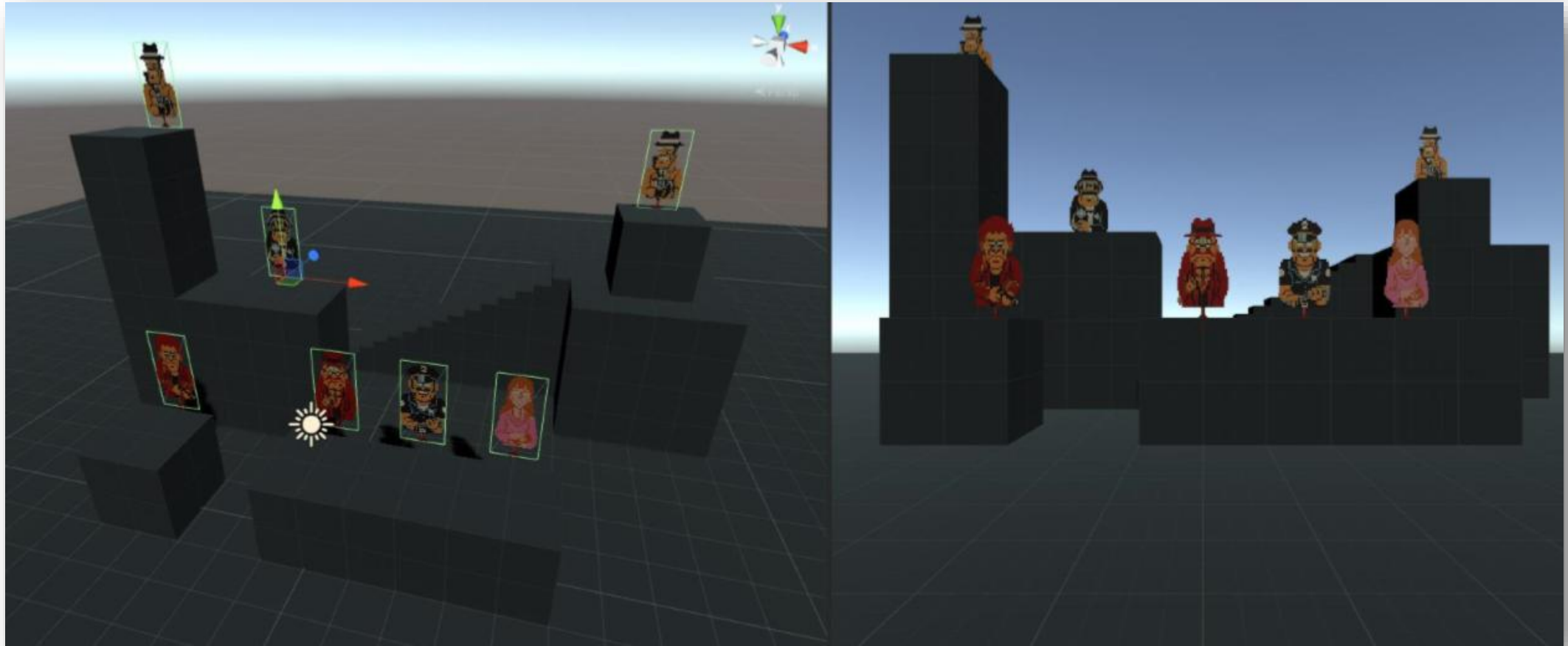
Assignment 2

My first (VR/AR) Game

Hogan's Alley, Nintendo (1984)
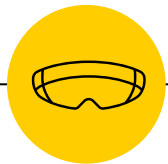
Hogan's Alley Revisited, YOU (2026)

Assignment rules: Deliverables

For each assignment:

- A playable demo
    - Unity build (.exe, .dll and folders) for Windows.
    - For assignment 1: .apk file for Android.

- Unity3D project sources (or Git repository).

- Documentation
    - Project structure
        - Game Scenes
        - Assets and Game Objects
        - Scripting
        - Interaction
    - VE Mechanics
        - How interaction/locomotion/feedback have been implemented?

- Max. 6 pages.

- For the submission of final presentation: Brief summary of the work performed.

- Deadline for all assignments: **7th January 2026**

Intelligent Virtual Environments

Development Work: Assigments (end)

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